On Syncope, and
Suspended Animation.

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Of Syncope

This disease depends upon a diminution or suspension of the motions of the heart.

Its symptoms are a sense of languor, and anxiety about the heart, giddiness & dimness of sight, noise in the ears, qusich, weak or absent pulse, paleness, coldness of the hands & feet, cold sweat on the forehead, a cessation or suspension of the animal functions of sense & motion. During the recovery from Syncope, we observe a continuance of the anxiety about the heart, vomiting, and convulsions. —

Women are more subject to this disease than men. It is sometimes a hereditary and now & then a family-disease. It is remarkable, it does not shorten life. I knew a citizen of Philadelphia who lived to be 90, who had been afflicted with it for

40 years.

Its Causes are local & general. The former are Aneurism, polypus, dropsy & ossification of the heart, or a disease in some of the large blood vessels that are contiguous to it. Syncope from these Causes ~~are is~~ is for the most part incurable. It may be known by its not having any ~~some~~ long remissions, and by being induced by light Causes.

The general Causes are such as act upon the whole System. These are

1 Profuse natural or Artificial hæmorrhages.
2 Great inanition from any Cause.
3 Excessive pain, or the sudden cessation of it.
4 Violent Emotions of the Mind.
5 Disagreeable sights & fœtid Odors.
6 Certain Antipathies to things not naturally

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6 disagreeable.

7 Offensive matters in the stomach such as putrid bile, and indigestible Aliments.

8 Great heat.

9 Drinking Cold water, or any other cold liquor when the body is unusually warm.

10 Contagious & miasmastic exhalations at=
=ting suddenly upon the body.

It is only when Syncope arises from these general Causes that it does not depend upon the Duration of life. The Remedies for Syncope divide them=
=selves into two Classes.

I Such as proper in a paroxysm of the disease.

II Such as proper to prevent its recurrence

To the I head belong

1 A recumbent posture with the head a little depressed.

2 Fresh Air. This must be obtained by

opening doors & windows, and permitting as few persons as possible to be near the person affected. 3. Cold water sprinkled on the face.
4 Applying stimulating substances to the nose such as volatile salt, snuff & breast feathers.
5 Frictions to the whole body.
6 Stimulating injections into the bowels, &
7 Stimulating applications to the feet, and other parts of the body that possess great sensi=bility, or ~~extensive~~ a prompt & extensive sympathy with the whole body.
~~Cold water~~ & the removal of all its exciting causes.

There are several cases of syncope which require specific & appropriate remedies in addition to those which have been mentioned. 1 When the disease arises from great heat ~~the remedies should~~ the hands & feet should be put into ~~warm~~ water heated above the heat of the body. ——

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2 when Syncope arises from ~~Cold~~ Drinking cold liquors, ~~the~~ Laudanum ~~the~~ or ardent spirits should be given in liberal doses.

II. To prevent ~~the~~ recurrence of Syncope the Remedies should be exercise, the cold Bath, Chalybeates, Lime, Bark, and a habit gradually acquired of resisting all its remote and exciting causes.

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on Suspended animation.

There are two grades of apparent death. ~~The~~ One ~~first~~ has been called by the Common people a Trance, the other Asphixia. In the former the whole body apparently dies, except ~~that~~ those parts in which the sense of hearing, and the mind are seated, and which in consequence they still retain some degree of Activity. As the disease generally comes on in the close of a fit of sickness at a time when the thoughts are wholly directed to the World of Spirits, the mind in a Trance from the habit it has recently acquired, continues to dwell upon the Scenes of happiness or misery which it had anticipated, and which from its debilitated state it now supposes to be present. After such persons recover, they honestly relate

relate as genuine visions or revelations, what they have dreamed, or seen only as mere illusions, or vivid exercises of the mind shut up in the brain. Or, if they are not induced by the previous train of thinking of the sick person, the conversations which usually take place in the same room with the apparently dead body, may suggest them, for they are generally upon subjects related to those which are supposed to be visions or revelations. A certain Thomas Say formerly of this city ~~lay~~ ~~lay~~ who lay ~~a day~~ for some time ~~in the~~ as a ~~situation of a~~ dead man, after his recuspitation mentioned the ~~names~~ of two persons who had died while he was in that situation, one of whom he said he saw in a place of happiness, & the other in the state of misery. This ~~was~~ knowledge was

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supposed by himself, and his friends to be ~~miraculous~~ communicated to him in a supernatural manner, but there can be but little doubt but that heard their deaths spoken of in the room in which his body was laid out, and that he fixed them in a state of happiness and misery from his previous knowledge of their moral character, or from his having heard what they were from the persons who mentioned the moments of their deaths.

In the second grade of ~~death~~ suspended animation which has been called Asphixia, there is a total absence of heat, sensation, and apparently of motion, as also of all the exercises of the mind. Its causes are

1 Offensive matters in the stomach. Half baked bread induced it in a gentleman ~~of~~ this

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city while on his travels in France.

2 Intense Cold. Animals ~~who~~ that sleep during the winter, are affected with Asphixia.

3 Immersion in Water. 4 Hanging. 5 Con=
=tagions & ~~fo~~ exhalations of all kinds, par=
=ticularly ~~[illegible]~~ Carbonic Acid Gas, and ~~[illegible]~~ such as are of a ~~both~~ Febrile & Idiosyncratic nature.

6 Lightning, 7 Intoxication & & violent emotions and passions of the mind.

The following Signs will serve to Distin=
=guish apparent death, from that which is real.

1 The Absence of the pallid & contracted face of death.

2 The Absence of Stiffness in the limbs

3 The long Duration of warmth ~~upon~~ on the Skin. There is sometimes a transient heat which succeeds the Coldness of the Skin, after death

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which arises from ~~its~~ the passage of the heat from the internal to the external parts of the body. This heat soon passes away, and is very different from that which continues for 12 or 24 hours after death.

5 Sweats on any part of the body.

6 The discharge of Urine & Stools.

7 The appearance of Vapor upon a looking glass held before the mouth.

8 The appearance of motion upon the surface of a tumbler of water placed upon the ensiform cartilage.

Life may be suspended with the absence of all these signs, and death may be real where most of them take place. Of this I have seen several instances in the course

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of my practice. ~~The body generally discover in the~~ all the signs that have been mentioned indicate partial life, and when not, seated in very ~~in~~ irritable parts, or connected with them by strong affinities, they soon perish, nor can life often be restored by the application of the most powerful stimulants to them.

~~The Remedies for bodies the Cause of suspended~~ I shall begin the Cure of suspended animation by first mentioning the Remedies for what has been called Asphixia. In doing so, I shall I take Notice of such as are proper for it from its Causes generally. and II mention such as proper for it from each of its Causes.

To the
In I head belong
1 placing the body in an easy & natural

that inflating the lungs with re=
=spired air has a greater power of
recalling life, ~~tot~~ than pure atmos=
=pherical air. New born infants are
recuspitated in this way. It is probable
the same ~~gow~~ effects would not be
produced by means of common air.
Linnaeus revived his youngest daugh^r.
who was apparently dead born by blow=
=ing his breath into her lungs. There
is an account in the German Ephe=
=merides of a woman being revived
in the same way. [It is probable
go to 4th

and stripping it of such Clothing, and ligatures employed in dress, as may tend to retard the return of life.

2 Warmth & frictions to every part of the body. They should be gentle or forcible, according to the supposed accumulation, or expenditure of excitability by the sudden or gradual suspension of life. They should be ~~[illegible]~~ gentle in the former, & forcible in the latter case.

3 Inflating the lungs with air by placing the nose ~~in~~ a pair of bellows in one nostril, and stopping the other. This practice is founded upon the necessity & importance of air in beginning and supporting animal life. There are facts that make it probable

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~~4 Stimulating Glysters of large Quantities of Air or Water, or small Quantities of Substances that act by this Quality.~~

4 Glysters that stimulate by this Quantity as Air or Water, or by this Quality as Spirit of Turpentine, Olive and Ardent Spirits. The recuspitation of the Shunamite Son ~~was~~ ~~re~~ mentioned in the Old testament was effected ~~by~~ in part by this means. The words which contain the history of this event are as follow. "And the went up and lay upon the Child, & put his mouth upon his mouth, & his eyes upon his eyes, and his hands upon his hands, and he stretched himself upon the Child and the flesh of the Child waxed warm". This process was repeated after a short interval,

upon which we are told the Child sneezed
seventimes & opened its eyes." Kings II. Ch. 5.
V: 34 & 35. I have said the recupitation of this
Child was effected probably by these Natural
means, but an efficacy was no doubt
imparted to them by a Supernatural power.
It is in this way we often find a Concur-
-rence of natural and Supernatural powers
in many of the events recorded in the Old
and new testaments. Perhaps the respired
Air employed in all the Cases that have
been mentioned acts more certainly than
atmospherical Air from its being somewhat
reduced, and thus more accommodated to the
excitability of the lungs.]

4 Stimulating Substances conveyed into
the ~~mouth~~ stomach by means of a tube contrived
for that purpose ~~the~~ are calculated to

V 6 Stimulating applications to the ~~skin~~ external parts of the body. I have read an account of a young man who had lain three days in a state of apparent death, being revived by pinching a large portion of his flesh. In this case the muscles were probably the last retreat of departing life. He did not revive until some days after the application of the remedy. ~~The parts that was~~ Cutting the flesh should not be neglected in desperate cases. This remedy is suggested by the cases of ~~recepi-tation~~ that are upon record of persons discover-ing signs of life, and were recovering after-wards from the first incision of a dissecting knife. If the cutting the flesh be objected to, boiling water may be applied to the skin. It will most useful - to the navel, breast & head.

excite and diffuse Action over the Whole body. This tube should be a little bent so as to enter into the Oesophagus thro' the nose when it cannot be made to enter the mouth.

5 Glysters rendered stimulating by their Quantity such as Air or Water, or by their Quality such as Spirit of turpentine, Wine or Ardent Spirits. The importance of this remedy is suggested by the intestines being in many instances the last retreat of the departing Sensibility of the System.

7 Certain stimulants applied to parts endowed with a peculiar & specific sensibility, such as the nose, the ears, the lips, the navel, the Soles of the feet, & the Windpipe.

In favor of the efficacy of stimulants to several parts of those I shall mention some corresponding facts.

1 Certain Odors such as Vol. Salt, Asafoetida, Gar=lic or Onions have sometimes produced recupera=tion when the disease has been of a transient

V a ~~funeral hymn, and a~~ loud
in one instance,
scream, and a funeral hymn ~~have~~
~~recalled~~ in another have recalled
life when it was apparently extinct

nature. I mentioned formerly an instance of hysterical syncope or asphixia being instantly cured by the pator of a physician's foot.

2 The human voice and sounds of different kinds have ~~[illegible]~~ produced recapitation by exciting impressions upon the ears. A whisper will sometimes have that effect, when loud speaking will do no service. ~~Talking of this~~ We see something analagous ~~to~~ this, in waking persons from ordinary sleep. The ~~the~~ impression of the whisper in this case is exactly proportioned to the excitability of the ~~[illegible]~~ sense of hearing. Talking of the time & place of interring a person who was supposed to be dead in the same room in which he was laid out as a corpse, suddenly ~~being~~ excited his suspended life. ~~This person was lived & died afterwards~~ Loud noises have sometimes had the same salutary effect. V

a man who was supposed to have died of a bilious fever in Tennessee in the year 1812, was put into his coffin, and deposited in his grave. ~~Upon~~ The noise of the first spadeful of earth that was thrown upon his coffin produced a groan that was distinctly heard by the person that surrounded his grave. The coffin was raised & opened, and its tenant taken out, and completely restored to life. In all these cases of recupitation by impressions made upon the cases, the body was in what is called a trance, but as the same state of the case and mind may take place in Asphixia, it will be proper to make use of them with other remedies.

3 The grandmother of an irish gentleman now of this city was recupitated by her lap dog jumping upon her coffin & licking

5 There is a degree of specific sensibility in the navel. ~~Let one of the inspired~~ Solomon ~~writers~~ alludes to it when he compares "the fear of the Lord, and departing from evil" to "health", or as it ought to have been trans=-lated "to" "medicine to the navel" from which it appears that stimulating medicines were formerly applied to ~~the navel~~ that part of the body. — There can be no doubt of their efficacy in light cases of suspended Animation.

7 her lips and Nose just before the hour ap-
-pointed for her interment, and after the
Company had assembled to follow her to the
grave. Dropping water from the height of
four or five feet upon the upper lip for
a few minutes has been known to
produce resuscitation when apparent death has been induced
~~power~~ by transient causes.
4 ~~The~~ Impressions made upon the soles of the
feet by tickling them, also by strong irritants
have had in some instances a prompt
effect in this disease.
6 In favor of the application of stimulants
to the Windpipe, Dr. Jones relates the following
facts in his Vulgar errors in Medicine. A
Gentleman ~~to~~ in Devonshire who had lived freely,
died and was laid out in state. His butler went
into the room where he lay in order to give
each of the persons who watched his corpse

during the night a glass of brandy. When he came to the body of his former master he said "Come old gentleman I will not pass you. You shall have a glass now you are dead of what you loved ~~[illegible]~~ while you were alive" & then opening his mouth he poured ~~it~~ it into a glass of the spirit some of which passed thro his glottis into his windpipe, and excited a cough which set the blood of his whole body in motion, and thus brought back his life. The mode of exciting the lungs which has been suggested by this accident is capable of being improved by employing substances more active that air to excite the action of the lungs, and thus to produce recuspication.

I shall now mention certain additional remedies for Asphixia suited to its particular causes.

1 When Asphixia arises from offensive matter

8 in the stomach, a solution of Tartar emetic, or of the Sulphate of Zinc should be conveyed by a tube into the stomach in order if possible to excite a vomiting. If this be impracticable, powerful irritants should be applied to a part or the whole of the parts of the body before mentioned.

2 In Asphixia from Cold, the additional remedy, of warmth a few degrees above the temperature of the body applied in the form of Air or Water will be proper.

3 In asphixia from drowning the remedies should be besides those which have been mentioned, the extraction of Water from the lungs by means of an instrument contrived for that purpose by Dr Goodwin. The Doctor has proved that death is not induced by this Water in the lungs, but by the want of the usual stimulus

of oxygen upon them.

[It has often been asked why a body which has perished from drowning, first sinks, & in the course of a day or two, or a longer time floats upon the surface of the water. To this Question I answer, the body in its first immersion contracts from cold, or fear, or both, at which time it becomes specifically heavier than the water. When this contraction is relaxed by death, the body rises and floats upon the surface of the water from its specific gravity becoming the same as that of the water. It is probable life is not completely extinguished, until the contraction of the body is completely resolved. Perhaps the extrication of air from the contents of the bowels and its dispersion thro' the bowels may help to elevate it upon the surface of the water]

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9 4 Asphixia from hanging has been supposed to arise from a stoppage of the reflux of blood from the brain, but late experiments prove that it is induced wholly by the stoppage of respiration. Bloodletting is commonly prescribed for it under a belief that the disease was an Apopelexy, but it is very improper. The remedies formerly recommended, particularly the excitement of the lungs should be relied upon for a cure.

5 Asphixia from Carbonic acid gas, Contagious and miasmatic exhalations should be treated with all the remedies that have mentioned & particularly with fresh Air. Its efficacy is strongly enforced by the case recorded by Dr Fy=
=Denham of a man who was supposed to be dead from the small pox, being revived & cured by opening the windows in which ~~his body~~ he was laid, and placing him in a stream of

fresh Air with nothing but a winding sheet upon his body.

6 Asphixia from Lightning it is said has been cured by the application of Electricity to parts of the body that have not been injured by the lightning. I mentioned some facts in support of this remedy in our Thesa=
=pentichs.

7 Asphixia from Intoxication has often been cured by the affusion of Cold Water upon the head. When Drunkenness was more com=
=mon in our City than it is at present, I have seen it cured by dragging the patient to a pump & pumping water upon him for ten, or fifteen minutes. The Cure has been so complete by this remedy, that the patient has walked home without staggering from the place where it was used.

8 Asphixia from violent emotions of mind require no ~~[illegible]~~ other remedies than those mentioned under our general head.

~~In [illegible] [illegible] of~~ After a recovery from Asphixia, the System sometimes reacts with so much force, as to require bleeding to reduce it. This should never be omitted when indicated. From neglecting it, Chronic diseases & death have sometimes followed a supposed cure of apparent death.

I have thus mentioned all the usual Remedies for Asphixia, & some new Ones. ~~I shall only add that they are not proper in the [illegible] [illegible] [illegible]~~ The same remedies are often used for what is called a Trance, but very

improperly when it follows a chronic disease, or an exhausted state of the excitability of the system. The most lenient stimulants only are proper in these cases. Perhaps in most cases it would be safest to leave the patient in a warm bed, and in an airy room, wholly to the influence of the ordinary stimuli that support animal life.

The signs of death are, 1 a clammi=ness of the skin, 2 an acid or alkaline odor issuing from the body. 3 a total relaxation of the sphincter ani, & 4 the fator which accompanies putrefaction. This fator I acknowledge sometimes takes place in malignant fevers without being followed by death. Sir John Pringle takes notice of it. I have

once seen it, and a recovery take place af=
=terwards in a young lady in this city, for
which reason it should ~~not always~~ never be relied
on without the previous marks concerning
with it. In all cases where the transition
from apparent health to death has been sudden, or where
a disease has terminated in death prema=
=turely, or before it has run its ordinary
course, and both without an obvious fatal cause,
interment should be delayed until
more or less of the signs of death have taken
place, and the body should be kept in
a situation favorable to its recuspitation,
& remedies should be employed for that
purpose.

There can be no doubt but that
many persons have been buried, ~~[illegible]~~ who have
been apparently dead, only, from the

neglect of the above circumstances. Hu=
=manity has often often shuddered at
the thoughts of it, but there is no occasi=
=on for sympathy as far as it relates to
pain and suffering in these cases, for
recupitation can never take place in a
light coffin either in the grave or out
of it to such a degree as to excite either
consciousness, or pain. ——